

Von Braun:

MAN BEHIND THE MISSILE

by Gordon L. Harris



The head of the Army Ballistic Missile Agency has devoted his life, from boyhood, to the idea that rocket power can carry man beyond earth's atmosphere

THE Army's top civilian rocket expert, Dr. Wernher von Braun, believes mankind is living in the greatest revolutionary era in history. It began, he declares, with the invention of the steam engine by James Watt. This and other sources of power have freed men from much of the bondage of human toil.

"Man's curiosity motivated scientific progress which has greatly improved the standard of living," Dr. von Braun observed. "Most political problems have resulted directly from the tremendous tech-

nological revolution. Inevitably society adapts itself to the benefits resulting from the efforts of the scientist."

The world-famed space expert enjoys the philosophical evaluation of the industrial-scientific era and its profound influences upon man and his environment. Dr. von Braun cited the air age as an example, noting the improvement in communications, the broadening of knowledge and understanding, and the telescoping of time and distance.

In his daily activity as director

of development operations of the Army Ballistic Missile Agency, located in Huntsville, Alabama, Dr. von Braun is surrounded by engineers, technicians, researchers, and the most modern electronic and mechanical facilities. They have been brought together by Army Ordnance for a single purpose—the development of guided missiles to strengthen U.S. defenses.

Dr. von Braun has been engaged in rocketry since boyhood. Reading about the stars and outer space at the age of 15, he came upon a suggestion that rocket power might some day carry man beyond the earth's atmosphere. That vision kindled his interest. It has never flagged.

He was born March 23, 1912, in Wirsitz, Germany. He won a college degree at the age of 20 and a doctorate from the University of Berlin in 1934. When he was 18 he joined a group of inventors in the German Society for Space Travel—regarded at the time as idle dreamers. Two years later he became associated with the ordnance development activity of the German army.

For the next five years he directed a small development station near Berlin, investigating liquid fueled rockets. Out of this effort came the early rockets known as the A-1, A-2 and A-3.

In 1937 von Braun was selected to head up technical development of the Peenemuende rocket center

where the V-2 rocket, introduced in the latter stages of World War II, was born. Under the stress of war and to satisfy the frantic haste of Hitler, the development of operational rockets was pushed without opportunity to check the work. The trial-and-error method was substituted for basic scientific investigation.

IT WAS during this period that von Braun incurred the wrath of the infamous Himmler. Gestapo agents reported that the director and two of his colleagues were more interested in the stars than in weapons. The three men were arrested March 15, 1944, and accused of sabotage. Field Marshal Keitel warned von Braun's superior, Major General Walter Dornberger, that the trio faced death. Keitel said the charge was based upon informer evidence that the prisoners never intended to make a weapon from their rocket.

"They said they worked under your pressure," Keitel told General Dornberger, who recounts the incident in his book, *V-2*, "only in order to obtain money for their experiments and the confirmation of their theories. Their object all along has been space travel."

A few days later, at the risk of his own military position, Dornberger obtained von Braun's release. Subsequently the others also were freed. Whatever their private opinions of Hitler, Dr. von Braun

and his associates launched the first V-2 rocket only six months after the Gestapo incident.

Not long afterward the war moved to a fiery end and the Peenemuende scientists faced a momentous decision—should they turn East or West? Von Braun knew exactly what he wanted. During the early 1930s, his brother had spent some time in the United States as an exchange scholarship student. When he returned to Germany he gave the rocketeer a glowing report of the technical and industrial progress of America, and the kindness and sympathetic treatment accorded him by its people. Dr. von Braun then and there resolved to get to the United States someday.

WITH Hitler's ambitions crashing in ruin a flood of contradictory directives reached Peenemuende from Berlin headquarters. Dr. von Braun and his colleagues decided to turn themselves over to the Western Powers. Soon afterward, an Army Ordnance group brought von Braun and 120 others to this country.

They became American citizens. Most of them are associated with von Braun in the Army Ballistic Missile Agency, at Huntsville, Alabama. Some direct research, others head up the nine laboratories which comprise von Braun's division: aeroballistics, computation, fabrication, guidance and control,

launching and handling, missile firing, structures and mechanics, systems analysis and reliability, and testing. Like von Braun they have built or purchased homes, send their children to Huntsville schools, attend church, and enjoy an occasional concert by a symphony they organized. They are as much a part of the Alabama community as if they had spent their entire lives in it. One of the youngest became president of the Junior Chamber of Commerce; he and others are active in community affairs.

The initial tasks assigned them by the Army in the Fall of 1945 and later years were diligently pursued. They were chiefly concerned with validating their Peenemuende discoveries. In Germany they had neither time nor resources to find out why one rocket succeeded and a counterpart failed. They had built and assembled rockets, fueled the giant devices, then crossed fingers and hoped they'd operate. Dr. von Braun recalls with a chuckle that it was never quite settled whether the V-2 had reached maturity because the hazard at the launching site was as great as in the target area.

It was the Army's ability to organize, direct and sympathetically coordinate rocket development activities that gave impetus to the investigations carried on by von Braun and his co-workers at White Sands Proving Ground, New Mex-

ico. Here they were used as consultants during the firings of captured V-2's, WAC Corporal rockets and by their basic research program established the firm foundation for what was to come.

Army Ordnance provided management and resources, von Braun and his team contributed their outstanding and unique knowledge, experience, and vision. Early in the Army's missile program engineers and scientists recruited across the country were brought into the picture. In 1950 the larger group began working on the medium range Redstone ballistic guided missile, recently unveiled publicly as the Army's newest and largest weapon. Redstone's development was speeded up by the establishment Feb. 1, 1956, of the Army Ballistic Missile Agency—the first organization created exclusively for development of ballistic missiles. Since then the staff has grown considerably as more technical specialists have enrolled. With Redstone near the production stage, the Agency is now developing the Jupiter IRBM missile which is designed to be launched on land or at sea, and will strike targets approximately 1,500 nautical miles distant.

THIS application of rocket propulsion power to highly successful Army missiles has given rise to speculation about other uses of the comparatively new force.

While von Braun's team ex-

plored the possibilities of large and potent surface-to-surface guided missiles, the Army pushed parallel programs with industry, research agencies, and contractors which resulted in a family of tactical rockets.

Major General J. B. Medaris, who commands the Missile Agency and who is an outspoken proponent of guided missile power in the national defense program, discussed this aspect of new uses. His opinions fit von Braun's contention that one can trace the advance of civilization by successive exploitations of power sources.

"The ballistic missile," General Medaris commented, "is a highly efficient engine, once free of the atmosphere. It is available without regard to weather. With the accuracies of automatic guidance now clearly foreseeable, it becomes a superb delivery system for those resources upon which the absolute subjection and control of an enemy in war must depend.

"In addition to the easily demonstrated use of missiles for selective application of measured force, the time has arrived to consider them the most advanced, the most efficient delivery system which can be predicted. And that means the delivery of any and all resources needed for control. That includes the acquisition of information, the concentration of manpower and shorter range weapons for local control, and the reinforcement of

such forces with men, materials, and long range selective firepower as the situation dictates."

The Agency commander explains that, because of its recognized limitations, the airplane as a military delivery system may have the shortest life of any similar system in history. Tomorrow's defense, he says, will be based upon the guided missile—which can carry troops and supplies as well as atomic or conventional explosive warheads.

THESE two men—one a career Army officer who fought as a Marine in World War I, and as an Army Colonel in World War II; the other the dedicated scientist who has experienced all the horror of dictatorship and war—complement each other perfectly in their unparalleled assignments. Upon the broad shoulders of the Army officer rests the task of perfecting long-range missiles to keep the United States ahead of any potential foe. He entrusts von Braun with technological development supporting his endeavors as the manager of their unique enterprise. It is to General Medaris that von Braun looks for men, materials, facilities, money and the objectives to pursue the projects. It is to von Braun that General Medaris looks for the "hardware," as the Army calls its weapons.

The Missile Agency's role is the dual one of research and develop-

ment. Following traditional Army policy, once the design has been perfected, production is turned over to private industry.

How does a scientist of von Braun's stature look upon this crash program to exploit technical competence and incredibly complex equipment in the development of giant missiles? He believes fervently that the preservation of hard-won freedom is worth any cost.

Having survived Hitler's reign of terror, this man understands the price of liberty. And he is obviously happy in the position, in which the Army has placed him. He explains the thin line which separates military applications from peaceful pursuits in these terms:

"The aircraft engineer designing tomorrow's commercial jet transport is the same man who designed today's jet bomber for the defense of his country. The pharmacist may produce a drug which, if taken in excess, is a toxic poison. Used in proper dosage under the conditions the physician stipulates, it can relieve pain or save life. That is how small is the difference between creating something which benefits society, and something society must have for its protection."

Dr. von Braun agrees completely with the hydrogen-bomb scientist, Dr. Edward Teller, who pleaded recently for atomic weapons of size and destructive power suited to battlefield need rather than the

catastrophic atomic bomb. This pleads the Army's requirement of measured force, applied in the exact quantity necessary to accomplish a specific purpose.

"As Dr. Teller has said, we must use the knife of the surgeon, not the executioner's axe," Dr. von Braun observed. "We don't want to destroy mankind. We must simply cut out the cancer if it threatens our security."

Dr. von Braun devotes himself to the task of perfecting better guided missiles with a tireless energy which inspires his associates. He holds to the unshakeable conviction that man will some day reach outer space. The immense power of giant rockets can, he con-

tends, launch orbiting stations far beyond earth's atmosphere.

ON HIS rare idle evenings, von Braun repairs with a group of friends to an observatory they are building on a wooded ridge just outside Huntsville. There the tall, blond wizard, who is president of the local astronomical society, and who serves on the editorial boards of several technical publications, bends to the telescope and searches the heavens.

"Why are you so much interested in exploring other worlds?" von Braun has been asked repeatedly.

"I can only answer," he replies, "it is man's destiny to know."

Public Notices

► Letter received by Hemet, California, druggist:

"Since taking your medicine, I am another woman. Needless to say, my husband is delighted."

► Request from audience at a meeting of the Calumet City, Illinois, town council:

"Would someone please oil the alderman's chair so we could hear what's going on?"

► Sign in a Washington, D.C., employment office:

"A Big Shot Is A Little Shot Who Kept Shooting"

—HAROLD HELFER